UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,151	10/14/2005	Audun Opem	43315-211929	5475

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/519,151	OPEM ET AL.
	Examiner	Art Unit	
	Songwei Qian	2191	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 December 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

    1.☒ Certified copies of the priority documents have been received.

    2.☐ Certified copies of the priority documents have been received in Application No. _____.

    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/14/2005*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

1.   The application is a 371 of PCT/IB03/02720 filed on 06/27/2003 (10/519,151).

2.   Claims 1-9 are pending in this application.

Information Disclosure Statement

3.   The information disclosure statement filed on October 14, 2005 has been

considered. However, the second reference (DE 19857683) disclosed in the section:

foreign patent documents is not considered because no English-translation of the

document is provided.

Claim Rejections - 35 USC § 101

4.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

5.   Claims 7-9 are rejected under 35 U.S.C. 101 as the claimed invention is directed

to non-statutory subject matter.

6.   In claims 7-8, a "computer program product" is being recited; however, it appears

that the computer program product would reasonably be interpreted by one of ordinary

skill in the art as software, per se. Software, per se, is not one of statutory subject

matter.

7.   In claim 9, a "computer program" is being recited; however, it appears that the

computer program would reasonably be interpreted by one of ordinary skill in the art as

software, per se. Software, per se, is not one of statutory subject matter.

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

9.   Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with

the enablement requirement. The claim contains subject matter which was not

described in the specification in such a way as to enable one skilled in the art to which it

pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification is not enabling for the subject matter "the compiler is revalidated for

any errors introduced between the first and the second compilation" because the

specification does not provide any steps or information regarding how the compiler is

revalidated for any errors introduced between the first and the second compilation. It is

noted in the specification (Page 5, lines 19-22 and FIG. 4) that an error can occur due to

failure in a computer's memory or failure in a disk. But, when an error occurs, it may not

have anything to do the compiler.

10.   As for claims 2-9, the claims are dependent on claim 1.

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

12.   Claims 1-2, 6-7, and 9 are rejected under 35 U.S.C. 103(a) as being

unpatentable over McKeeman et al. (US Pat. 5,754,860; the reference was revealed in

Applicant's IDS filed on 10/14/2005), hereinafter "McKeeman", in view of Schmitt et al.

(US Pub. # 2002/0046397 A1), hereinafter "Schmitt".

13.   As for claim 1, McKeeman discloses:

A method, the method comprising:

compiling a test program a first time which test program is defined in a control

language (FIG. 2 and Col. 1, lines 23-40);

validating the compiler by verifying that the test program executes correctly (Col.

1, lines 23-40);

generating a first software means derived from the compiled test program

intended for later comparison purposes (FIG. 2);

compiling the test program a second time (FIG. 2);

compiling a program after the compilation of a user-written program (FIGs. 13-

15 and Col. 30, lines 7-17);

generating a second software means intended for a comparison based on the

second compilation of the test program (FIG. 2 and Col. 6, lines 50-65);

comparing the first software means with the second software means (FIGs. 2

and 5b); wherein the compiler is revalidated for any errors introduced between the first

and the second compilation (FIGs. 13-15 and 16a, Col. 1, lines 23-40, Col. 6, lines 47-

49 and 60-65);

enabling, provided that the revalidation indicates no errors in the compiler the

user-written program to execute in a device (Col. 1, lines 23-40 and Col. 6, lines 47-49

and 60-65; note that when a compiler is validated, any program compiled by the

validated compiler should be allowed to execute in a device).

However, McKeeman does not explicitly disclose:

the user-written program to execute in a device with safety features for control of real world entities.

On the other hand, Schmitt discloses:

the user-written program to execute in a device with safety features for control of real world entities (computer programs for industrial controllers, in particular motion controllers, ABSTRACT, lines 1-3 and FIGs. 4-5).

It would have been obvious to one of ordinary skill in the art at the time of invention was made to combine the teachings of McKeeman with the teachings of Schmitt by enabling the user-written program to execute in a device with safety features for control of real world entities in order to control an industrial process programmable controller (PLC), or programming the motion controller of a processing machine or production Machine (Schmitt, [0007]).

14. As for claim 2, McKeeman discloses:

the comparing step is performed in the same workstation or general-purpose computer as that in which the compiler is executing (FIGs. 1-2).

15. As for claim 4, McKeeman discloses:

the comparing step is performed in the device (FIGs. 1-2),

and Schmitt discloses:

the device with safety features (computer programs for industrial controllers, in

particular motion controllers, ABSTRACT, lines 1-3 and FIGs. 4-5).

16.   As for claim 6, McKeeman discloses:

the test program is defined in a control language (FIG. 2 and Col. 6, lines 33-35),

and Schmitt discloses:

a control language derived from the standard IEC 6-1131 ([0037], lines 2-6).

17.   As for claim 7, the claim is rejected for the same reason as set forth in the

rejection of claim 1.

18.   As for claim 9, the claim is rejected for the same reason as set forth in the

. rejection of claim 1.

19.   Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McKeeman in view of Schmitt, and further in view of Frey et al. (US Pub. #

2003/0135842 A1), hereinafter "Frey".

20.   As for claim 3, both McKeeman and Schmitt do not explicitly discloses:

the software means is a check-sum or a code for cyclic redundancy check.

However, Frey discloses:

the software means is a check-sum or a code for cyclic redundancy check
([0141]).

It would have been obvious to one of ordinary skill in the art at the time of invention was
made to combine the teachings of McKeeman and Schmitt with the teachings of Frey by
having the software means to be a check-sum or a code for cyclic redundancy check in
order to verify that the source code file has not been tampered with (Frey, [0141]).

21.   As for claim 4, McKeeman discloses:

the comparing step is performed in the device (FIGs. 1-2),

and Schmitt discloses:

the device with safety features (computer programs for industrial controllers, in
particular motion controllers, ABSTRACT, lines 1-3 and FIGs. 4-5).

22.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over
McKeeman and Schmitt in view of Frey, and further in view of Moller et al. (US Pat.
6,598,074 B1), hereinafter "Moller".

23.   As for claim 5, none of McKeeman, Schmitt, and Frey explicitly discloses:

an additional step of downloading a variable that changes over time, which is
downloaded in the same message as the check-sum or code to the device, where the
variable that changes over time is used to achieve a change in the message.

However, Moller discloses:

an additional step of downloading a first information, which is downloaded in the

same message as a second information to the device (Col. 10, lines 3-8 and FIGs. 1-2);

the variable that changes over time is used to achieve a change in the message

(this message contains a timestamp, Col. 11, lines 12-14; note that timestamp is

considered as a variable and for different time, timestamp is different);

a first information is a variable that changes over time (timestamp, Col. 11, lines

12-14); and

a second information is the check-sum or code (Col. 10, lines 3-8).

It would have been obvious to one of ordinary skill in the art at the time of invention was

made to combine the teachings of McKeeman, Schmitt, and Frey with the teachings of

Moller by comprising an additional step of downloading a variable that changes over

time, which is downloaded in the same message as the check-sum or code to the

device, where the variable that changes over time is used to achieve a change in the

message in order to control an industrial process programmable controller (PLC), or

programming the motion controller of a processing machine or production Machine

(Schmitt, [0007]).

24.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over

McKeeman in view of Schmitt, and further in view of Moller.

25.   As for claim 8, the claim is rejected for the same reasons as set forth in the

rejections of claims 7 and 5. In addition, Moller discloses:

receive a signal sent across the Internet comprising the first software means

(Col. 10, lines 6-8 and FIG. 1).

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Songwei Qian whose telephone number is 571-270-

1910. The examiner can normally be reached on M-F (alternative Friday off 8:00am

thru 5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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11/07/2007

MARY STEELMAN
PRIMARY EXAMINER